ABSTRACT OF THE DISCLOSURE

A network device identifies a non-adaptive flow as follows. The network device drops packets on a random basis using a Random Early Detection (RED) algorithm. A classifier reads indicia of a selected flow from at least one field of a header of a packet received by the network device. The network device calculates a drop interval for packets of the selected flow dropped by the RED algorithm, in response to a time at which the packets were dropped. The network device then applies a statistical test to drop intervals of a plurality of flows in order to identify the non-adaptive flow.